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Selwyn

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(54) **FLUID PRESSURE AMPLIFIER**

5,727,529 * 3/1998 Tuckey 123/514

(76) **Inventor:** **Frederick Philip Selwyn**, 3 Efford Park
Business Park, Vicarage Road, Bude
Cornwall EX 23 8LT (GB)

FOREIGN PATENT DOCUMENTS

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
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899 903	12/1953	(DE) .
0 655 557	5/1995	(EP) .
2 589 900	5/1987	(FR) .
6447	5/1913	(GB) .
521 783	5/1940	(GB) .

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* cited by examiner

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(58) **Field of Search** **417/225, 53; 137/624.14**

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,945,447 7/1960 Yamaguchi et al. .

Primary Examiner—Charles G. Freay
Assistant Examiner—Ehud Gartenberg
(74) *Attorney, Agent, or Firm*—Miles & Stockbridge P.C.;
John C. Kerins

(57) **ABSTRACT**

A fluid pressure amplifier is provided, which includes a pipe for flowing fluid and having an array of holes formed therein through which fluid can flow from within the pipe in use, and resiliently-movable obturator means adjacent the pipe and operatively responsive to fluid inlet pressure in the pipe, in which fluid inlet pressure causes the obturator means to oscillate between conditions which alternately permit and prevent fluid from passing through the holes, whereby the fluid leaving the pipe has a pulsed increased pressure. The amplifier is intended for use especially to increase the pressure of water flowing through a pipe submerged in a river, to provide a pumping action to a higher level.

4 Claims, 3 Drawing Sheets

